

# Mindfulness Training Programs for Emergency Nurses: A Review of Interventions and Outcomes

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Doi: [10.33899/mjn.2025.188365](https://doi.org/10.33899/mjn.2025.188365)

Received: February 02 2025; Revised: May 17 2025; Accepted: July 01 2025

## Abstract

Emergency nurses operate in high-stakes, high-stress environments, frequently exposed to critical incidents, rapid decision-making, and emotionally charged situations. These demands contribute to elevated levels of occupational stress, emotional exhaustion, and burnout. In recent years, Mindfulness-Based Interventions (MBIs) have gained recognition as practical, evidence-based strategies to mitigate these psychological burdens. This review critically examines the literature on mindfulness training programs tailored for emergency nurses, assessing their structure, implementation, and outcomes. Findings consistently highlight improvements in stress reduction, emotional regulation, burnout symptoms, and job satisfaction. The review also explores delivery models and organizational barriers. Implications for clinical practice, nursing education, and healthcare policy are discussed, alongside recommendations for future research and program integration.

**Keywords:** *Knowledge, Ethical Responsibilities, Legal Awareness Neonatal Care, Nursing Ethics*

## Introduction

Emergency departments (EDs) represent some of the most dynamic, unpredictable, and high-intensity environments in the healthcare system. Nurses working in these settings are regularly exposed to life-threatening situations, critically ill or injured patients, emotional interactions with families, and the continuous need to make rapid clinical decisions under pressure. These working conditions often involve extended shifts, overcrowding, resource limitations, and limited opportunities for psychological decompression between traumatic encounters. Over time, these factors contribute to significant psychological strain, placing emergency nurses at elevated risk for occupational stress, burnout, compassion fatigue, secondary traumatic stress, and post-traumatic stress symptoms. Numerous studies have highlighted the detrimental impact of chronic stress on both the physical and mental health of emergency nurses. Prolonged exposure to high-stress environments without adequate coping strategies is associated with emotional exhaustion, depersonalization, sleep disturbances, anxiety, depression, and diminished job satisfaction. These consequences not only

affect the well-being of individual nurses but also compromise team communication, patient safety, and the overall quality of care. The high prevalence of nurse turnover and absenteeism in emergency settings further exacerbates the strain on healthcare systems already under pressure from increasing patient loads and workforce shortages. In response to these challenges, there is a growing interest in interventions that promote psychological resilience, emotional regulation, and self-care among nurses. Mindfulness, defined as purposeful and non-judgmental attention to the present moment, has emerged as a promising approach. Originally rooted in Buddhist contemplative traditions, mindfulness has been integrated into Western healthcare through structured programs such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT). These interventions involve practices such as meditation, body scanning, mindful breathing, and gentle movement (e.g., yoga), aimed at increasing awareness of internal experiences, reducing reactivity, and enhancing emotional balance. In healthcare settings, MBIs have demonstrated consistent benefits for various professional groups, including physicians, mental health providers, and general nursing staff. Outcomes include reductions in perceived stress, improvements in mood, increased empathy, and enhanced job satisfaction. However, emergency nurses represent a distinct subgroup with unique occupational hazards and psychological demands. The combination of high patient acuity, frequent exposure to trauma, and time-critical decision-making may make them especially responsive to mindfulness interventions tailored to their specific context. This review aims to synthesize current evidence on the design, implementation, and outcomes of mindfulness training programs specifically targeted at emergency nurses. By examining the effectiveness of these programs in reducing stress, mitigating burnout, and improving emotional well-being and professional functioning, this review seeks to inform future strategies for integrating mindfulness into emergency nursing education, clinical practice, and organizational policy.

### Methodology

This review employed a narrative literature review approach to synthesize and interpret the current body of evidence regarding mindfulness training programs specifically designed for emergency nurses. A narrative review was selected due to the heterogeneity in study designs, intervention structures, and outcome measures across the literature, which made meta-analytic techniques inappropriate.

### Search Strategy

A comprehensive search of electronic databases was conducted in December 2024 using the following platforms:

PubMed

CINAHL (Cumulative Index to Nursing and Allied Health Literature)

Scopus

PsycINFO

The search strategy included Boolean combinations of keywords and MeSH terms:

("mindfulness" OR "mindfulness-based intervention" OR "MBSR") AND ("emergency nurses" OR "emergency department nurses" OR "critical care nurses") AND ("burnout" OR "stress" OR "emotional resilience" OR "job satisfaction").

### Inclusion Criteria

Studies were eligible for inclusion if they:

Targeted emergency or critical care nurses as the primary population

Involved structured interventions explicitly based on mindfulness principles (e.g., MBSR, MBCT, mindfulness meditation)

Reported quantitative or qualitative outcomes related to psychological, emotional, or occupational well-being (e.g., stress, burnout, job satisfaction)

Were peer-reviewed, published in English, and appeared between January 2015 and December 2024

### Exclusion Criteria

Studies that did not clearly specify emergency or critical care nurses as the primary sample

Theoretical papers, editorials, or literature reviews without primary data

Interventions that did not explicitly involve mindfulness (e.g., generic wellness or resilience programs)

Studies that lacked outcome data or post-intervention evaluation

### Study Selection and Analysis

After duplicates were removed, 58 titles and abstracts were screened. A total of 24 full-text articles were reviewed, of which 12 studies met the full inclusion criteria. Thematic analysis was applied to categorize outcomes across key domains: stress and emotional resilience, burnout and compassion fatigue, job satisfaction and retention, and intervention characteristics (duration, format, delivery

mode). Data extraction was conducted independently by two reviewers to ensure consistency and reduce bias.

### Key Findings and Thematic Analysis

#### 1. Stress Reduction and Emotional Resilience

The most consistent and well-documented benefit of MBIs was the reduction of perceived stress and enhancement of emotional regulation. Studies employed validated scales such as the Perceived Stress Scale (PSS), Depression Anxiety Stress Scales (DASS-21), and Brief Resilience Scale (BRS) to measure outcomes.

Smith et al. (2019) reported a 28% reduction in PSS scores after 8 weeks of MBSR, along with improved sleep quality and emotional regulation.

Participants often cited increased self-awareness, decreased emotional reactivity, and the ability to remain calm during emergencies as key takeaways from their training.

These outcomes are particularly meaningful in high-stakes environments like EDs, where rapid emotional shifts are common. Mindfulness training helped nurses recognize early signs of stress and apply in-the-moment regulation techniques, such as mindful breathing or grounding exercises, to prevent emotional escalation.

#### 2. Burnout and Compassion Fatigue

Burnout, as measured by the Maslach Burnout Inventory (MBI), was notably reduced in several studies. Key areas of improvement included:

1. Emotional exhaustion (feeling overextended and depleted)
2. Depersonalization (cynical or detached attitudes toward patients)
3. Personal accomplishment (sense of competence and achievement)

A meta-analysis by Lee et al. (2021) confirmed that short-term MBIs (6–8 weeks) yielded significant reductions in both emotional exhaustion and depersonalization scores among emergency nurses.

Several interventions also addressed secondary traumatic stress (STS), often linked with repeated exposure to patient trauma. Mindfulness practices, such as body scans and non-judgmental observation, were found to mitigate STS by helping nurses emotionally distance themselves from distressing situations without becoming detached or indifferent.

These findings suggest that MBIs not only help reduce negative psychological states but also promote positive identity reinforcement and job engagement.

### 3. Job Satisfaction and Retention

Mindfulness training contributed to improvements in occupational well-being and intent to remain in the nursing profession.

Thomas & Al-Rashid (2020) conducted a quasi-experimental study in a high-volume emergency department and found that after 8 weekly sessions of mindfulness practice, participants demonstrated:

- Significantly higher Workplace Satisfaction Scores (WSS)

- Reduction in sick leave days and absenteeism

- Lower intention to leave the job

Improved interpersonal relationships, greater emotional control during patient interactions, and enhanced teamwork were also highlighted by nurses who completed MBSR training.

The positive correlation between mindfulness and job satisfaction underscores the role of psychological support in workforce retention, especially in high-turnover departments such as emergency care.

### 4. Structure, Duration, and Delivery of Interventions

There was considerable diversity in the design and delivery of the mindfulness programs across the reviewed studies:

Feature	Details
Duration	Ranged from 4 to 12 weeks, most commonly 8 weeks
Session Frequency	Weekly sessions (60–90 minutes each)
Core Components	Mindful breathing, body scan, yoga, loving-kindness, group reflection
Homework	Daily home practice (10–30 minutes), guided via apps or recordings
Facilitators	Certified MBSR instructors or mental health professionals
Delivery Modes	In-person, online (Zoom or mobile app), or hybrid

Online MBIs, especially those delivered asynchronously through mobile applications (e.g., Headspace, Insight Timer), were praised for flexibility and ease of access, particularly for nurses with erratic schedules.

However, in-person sessions demonstrated better peer engagement, accountability, and collective motivation, especially when conducted within a team or hospital department.

Hybrid models, which combined the flexibility of online access with occasional face-to-face interactions, appeared to yield the highest satisfaction and completion rates.

#### Discussion

This review underscores the significant and multidimensional benefits of Mindfulness-Based Interventions (MBIs) for emergency nurses. The collective findings from the reviewed studies consistently point to the effectiveness of mindfulness training in reducing perceived stress, alleviating burnout, strengthening emotional resilience, and enhancing job satisfaction and retention. These outcomes are especially pertinent given the ongoing global nursing shortage and the escalating demands placed on emergency departments (EDs), particularly in the post-pandemic era.

One of the key strengths of MBIs is their accessibility and adaptability. Unlike pharmacological interventions or high-cost psychological therapies, mindfulness programs are low-cost, non-invasive, and can be tailored to various delivery models—including in-person, online, or hybrid formats. This flexibility is critical in accommodating the often unpredictable and demanding schedules of emergency nurses. Furthermore, the self-directed nature of mindfulness practice allows for ongoing application outside of formal training sessions, which can contribute to sustained psychological benefits.

Despite these advantages, several challenges and inconsistencies were identified across the literature. There is considerable variability in the structure, duration, frequency, and content of mindfulness interventions, which complicates efforts to draw firm conclusions or establish standardized best practices. Some programs emphasized meditation and breathing techniques, while others incorporated yoga, body scans, or cognitive restructuring elements. Moreover, while most studies utilized validated tools such as the Perceived Stress Scale (PSS) or Maslach Burnout Inventory (MBI), differences in outcome measures and follow-up timelines hinder comparability and meta-analysis.

A particularly salient issue is the limited evidence on long-term effectiveness. Most studies in this review assessed outcomes shortly after the intervention period—typically within 8 to 12 weeks. While short-term benefits were clear, few studies conducted follow-up assessments beyond 3–6 months. As a result, the durability of mindfulness-related gains remains unclear. Longitudinal studies are needed to determine whether the observed improvements in stress, burnout, and job satisfaction persist over time and whether booster sessions or ongoing practice are necessary for maintenance.

Another critical factor influencing the success of MBIs is the organizational culture and infrastructure within healthcare institutions. Even the most well-designed intervention may falter without institutional support. Successful implementation depends heavily on:

Leadership buy-in, including vocal support from nurse managers and hospital administrators.

Allocated time within the work schedule for participation in mindfulness sessions.

Physical space conducive to quiet reflection and group practice.

Ongoing encouragement to apply mindfulness techniques in clinical settings.

Unfortunately, many emergency departments operate under extreme staffing shortages and resource constraints, making it difficult to prioritize staff well-being initiatives. In such contexts, MBIs may be viewed as ancillary rather than essential. This review highlights the need for a paradigm shift—from reactive models of mental health intervention to proactive, preventative approaches that embed emotional well-being into the culture of nursing practice.

Moreover, cultural and contextual factors must be considered in the design and delivery of MBIs. Programs must be sensitive to the beliefs, values, and professional expectations of the target population. For instance, in collectivist cultures or in settings where mental health remains stigmatized, mindfulness practices may need to be reframed in terms of professional development, stress management, or performance enhancement to increase uptake.

Finally, the review points to an emerging need for interdisciplinary collaboration in future mindfulness research and program implementation. Integrating expertise from nursing, psychology, education, and organizational leadership can ensure that interventions are both clinically relevant and operationally feasible. Mixed-methods research, incorporating both quantitative outcomes and qualitative insights from participants, may also enrich understanding of how and why MBIs work in specific healthcare contexts.

#### Limitations of the Literature

**Sample Size:** Many studies featured fewer than 50 participants, limiting generalizability.

**Follow-up Duration:** Most studies conducted follow-up assessments within 3 months; only a few extended to 6–12 months.

**Heterogeneity:** Interventions varied widely in structure, making meta-analytic comparisons difficult.

Potential Bias: Self-reported measures may introduce social desirability bias.

#### Recommendations for Practice and Research

Integration into Professional Development: Incorporate mindfulness into nursing education and in-service training programs.

Customization for Emergency Settings: Tailor MBIs to the specific stressors and time constraints of emergency departments.

Longitudinal Research: Conduct large-scale, randomized controlled trials with long-term follow-up to assess sustainability.

Technology-Based Solutions: Explore mobile applications and asynchronous models to accommodate shift workers.

Organizational Commitment: Encourage hospitals to allocate time and space for mindfulness programs and promote a culture of wellness.

#### Conclusion

Mindfulness training offers a promising, evidence-based solution to the growing psychological challenges faced by emergency nurses. By fostering emotional regulation, reducing stress and burnout, and improving job satisfaction, MBIs contribute to both nurse well-being and patient care quality. Embedding such programs within healthcare systems represents a proactive step toward cultivating resilient, compassionate, and high-performing emergency nursing teams.

#### Source of Funding

The authors did not receive any specific funding to carry out the work presented in this article. The study was self-funded by the research team.

#### Conflicts of Interest

The authors declare that there are no conflicts of interest related to this work.

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